

DRILL HOLES

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BORDER REV. DATE: June 1, 2004

PROJECT DESCRIPTION

I. GENERAL

This project involves the reconstruction of an existing Traffic Control Signal at the intersection of MD 197 (Laurel Bowie Rd) and Old MD 450 (Annapolis Rd) in Prince George's County. The existing span wire signal shall be replaced with a new mast arm signal with video detection. This intersection shall also be interconnected to the north with Gallant Fox Lane and to the south with Tulip Grove Drive. MD 197 (Laurel Bowie Rd) is assumed to run a north - south direction.

II. INTERSECTION OPERATION

- The intersection shall continue to operate in a NEMA four-phase, fully-actuated mode, with the MD 197 (Laurel Bowie Rd) approaches running concurrently. The Exclusive/Permissive left turn phase for the northbound approach of MD 197 (Laurel Bowie Rd) shall remain in operation. The pedestrian phase with pushbutton actuation across the north leg of MD 197 (Laurel Bowie Rd) shall be upgraded to a Countdown pedestrian phase with audible pushbutton actuation. The Old MD 450 (Annapolis Rd) approach shall continue to run in its own phase.
- A full-traffic-actuated, eight-phase controller with video interface and all necessary equipment housed in a NEMA size "6" base-mounted cabinet shall be installed at this intersection.
- SHA signal shop shall install APS control unit into controller cabinet. The Contractor shall deliver the Control Unit and audible pushbuttons to the SHA Signal Shop for testing and programming.

III. SPECIAL NOTES

- The Contractor shall be responsible for terminating all signal cables, excluding interconnect, to the appropriate terminals and shall properly label each cable.
- All controller cabinet wiring will be performed by the S.H.A. Signal Shop Contact Mr. Ed Rodenhizer at (410) 787-7650 seventy-two hours in advance of intended work.
- All underground and overhead utilities shown on these plans are schematic only and may not be complete. The Contractor shall be responsible for notifying Miss Utility prior to construction so that all utilities may be located in the field. If the Contractor perceives that a conflict between the utilities and the traffic signal will occur, the Contractor shall notify the Project Engineer immediately so that the conflict may be resolved.
- At no time shall the intersection be operating in a dark mode for any approach.
- APS will function as follows:
FOR LAUREL BOWIE RD
 - When pedestrian locates and presses pushbutton for an extended time, the pushbutton unit will be "Wait to cross Laurel Bowie Road."
 - When WALK phase begins, the message will be a rapid tick which will last for the duration of the WALK phase.
- Upon completion of this project, the Contractor shall notify Mr. Robert Snyder at (410) 787-7631 to arrange for the phone line installation. The Contractor is to provide Mr. Robert Snyder with the nearest street address, zip code and phone number.

The contact persons for District #3 (Prince George's County) are as follows:

Mr. Brian Young
Assistant District Engineer - Traffic
Phone: (301) 513-7358

Mr. Wayne Mowdy
Assistant District Engineer - Maintenance
Phone: (301) 513-7304

Mr. Augie Rebish
Assistant District Engineer - Utility
Phone: (301) 513-7350

Mr. Richard L. Daff, Sr.
Chief, Traffic Operations Division
Phone: (410) 787-7630

Mr. Ed Rodenhizer
Signal Shop
410-787-7652

Sonny Bailey
Sign Shop
410-787-7670

The power company representative is:

Mr. Steve Schneider
Baltimore Gas and Electric
7317 Parkway Drive South
Hanover, MD 21076
410-859-9310

EQUIPMENT LIST
A. EQUIPMENT TO BE SUPPLIED BY S.H.A..

ITEM NO.	DESCRIPTION	QUANTITY
9042	Controller ASC II with telemetry	1 EA
9044	Controller cabinet, size "6"	1 EA
9086	Video detection interface equipment: 1-4 cameras (To be installed by signal shop). 4-channel rack mounted amplifier	1 EA
9571	Sheet aluminum signs to consist of:	85 SF
	(mast arm or pole mount)	
	D3-2 "(arrow) Annapolis RD" sign, (variable x 16") mast arm	1 EA
	D3-2 "Annapolis RD(arrow)" sign, (variable x 16") mast arm	1 EA
	D3-2 "Laurel Bowie RD" sign, (variable x 16") mast arm	1 EA
	R3-5L "LEFT TURN ONLY" sign, (30" x 36") mast arm	3 EA
	R3-4 "NO U- TURN (Symbolic)" sign, (24"x24"). mast arm.	1 EA
	GUIDE SHIELD ASSEMBLY (48"x75") pole mounted.	1 EA
	M3-1 "NORTH"(30"x15")	
	M1-5 "MD 197"(48"x36")	
	M6-1 "left arrow"(30"x24")	
	Pedestrian education R10-3(1) sign. (Notes: sign to read "PUSHBUTTON TO CROSS LAUREL BOWIE RD").	2 EA

EQUIPMENT LIST (cont.)

B. EQUIPMENT TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR

ITEM NO.	DESCRIPTION	QUANTITY
1001	Maintenance of traffic per assignment.	3 EA
2002	Test Pit Excavation	6 C.Y.
6002	Standard type A combination curb and gutter 12" gutter pan 8" depth.	40 L.F.
6004	4" concrete sidewalk.	410 S.F.
6005	Detectable warning surfaces.	40 S.F.
8001	12" LED signal head section.	28 EA
8002	2 wire Central Control unit	1 EA
8007	Audible/tactile pedestrian pushbutton station & signs.	2 EA
8011	Embedded Metered service pedestal.	1 EA
8014	LED 16" countdown pedestrian signal head.	2 EA
8016	Mast arm pole and 50' mast arm any "T" dimension	1 EA
8020	Non-invasive detector (any length) lead-in cable up to 1000'.	4 EA
8021	Breakaway Pedestal pole (10').	2 EA
8022	Remove and dispose of existing material and equipment per assignment.	1 EA
8024	Twin mast arm pole and 50'/60' (cut to 52') mast arms any "T" dimension.	1 EA
8027	Video detection camera & cable.	2 EA
8032	Schedule 80 rigid PVC conduit up tp 4" - bored.	315 L.F.
8034	Schedule 80 rigid PVC conduit up tp 4" - trenched.	1025 L.F.
8035	Wood sign supports up to 4"x6".	48 L.F.
8038	No. 6 AWG stranded bare copper ground wire.	525 L.F.
8043	Electrical cable 1-conductor No. 4 AWG THHN/THWN.	50 L.F.
8044	Furnish and install electrical handhole.	10 EA
8046	Install overhead sign.	85 S.F.
8051	12-pair communication cable jelly-filled (underground).	895 L.F.
8054	Cut, clean, galvanize and cap traffic signal structure.	1 EA
8056	Electrical cable - 2 conductor (No. 14 AWG).	400 L.F.
8058	Electrical cable - 5 conductor (No. 14 AWG).	525 L.F.
8059	Electrical cable - 7 conductor (No. 14 AWG).	1170 L.F.
8067	Install controller and cabinet base mount.	1 EA

C. EQUIPMENT TO BE REMOVED

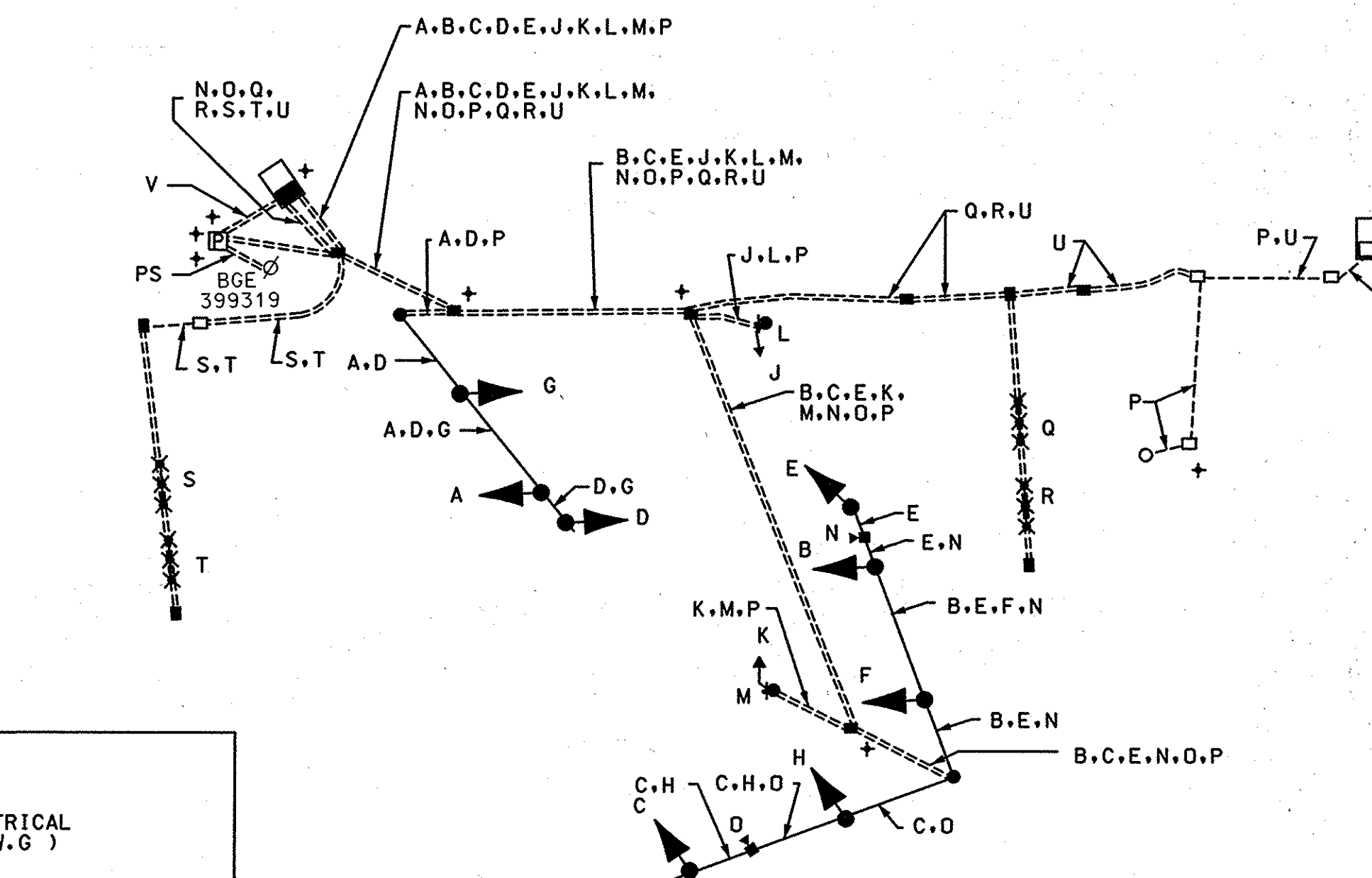
SHA Forces shall remove the controller and all auxiliary equipment from the controller cabinet. The cabinet and all other removed signal materials are to become property of the contractor.

PHASE CHART

	1	2	3	4	5	6	7	8	9	10
PHASE 2 & 6	G	G	G	G	G	R	R	R	DW	DW
2 & 6 CHANGE	Y	Y	Y	Y	Y	R	R	R	DW	DW
PHASE 1 & 6	←G-→G	←G-→G	G	R	R	R	R	R	DW	DW
1 & 6 CHANGE	←Y-→G	←Y-→G	G	R	R	R	R	R	DW	DW
PHASE 4	R	R	R	R	R	G	G	G	DW	DW
4 CHANGE	R	R	R	R	R	Y	Y	Y	DW	DW
PHASE 4 ALT	R	R	R	R	R	G	G	G	WK	WK
PED CLEAR / COUNTDOWN	R	R	R	R	R	G	G	G	FL/DW	FL/DW
4 ALT CHANGE	R	R	R	R	R	Y	Y	Y	DW	DW
FLASHING OPERATION	FL/Y	FL/Y	FL/Y	FL/Y	FL/Y	FL/R	FL/R	FL/R	DARK	DARK

NOTE: PHASE 1 SHALL OPERATE AS A LAG LEFT TURN

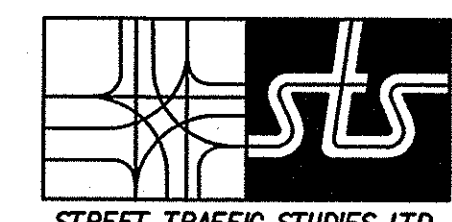
WIRING DIAGRAM



WIRING KEY

- 7-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 5-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- 2-CONDUCTOR ELECTRICAL CABLE (NO. 14 A.W.G.)
- CONTROL CABLE (CAMERA TO CONTROLLER)
- STRANDED BARE COPPER GROUND WIRE (NO. 6 A.W.G.)
- NON-INVASIVE MICROLOOP LEAD-IN CABLE (ANY LENGTH)
- 12-PAIR VOICE GRADE INTERCONNECT CABLE (JELLY FILLED)
- 3-1 CONDUCTOR ELECTRICAL CABLE (NO. 4 A.W.G.)
- PROPOSED UNDERGROUND SERVICE TO BE INSTALLED BY BGE
- GROUND ROD

TOD NO: AT914-04
SHA No: PG591A52/B52
MD 197: MD 450 to Old MD 450



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TS-07
PLOTTED: 8/24/2007 10:00 AM
FILE: 5177q1.dgn

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION

MD 450 AND MD 197

BOWIE, MARYLAND

GENERAL INFORMATION SHEET

SCALE NONE	DATE 4/19/07	CONTRACT NO. AT9145185
DESIGNED BY JWA	COUNTY PRINCE GEORGE'S	
DRAWN BY RC	LOGMILE 16019703.08	
CHECKED BY	TMS NO. H812	
F.A.P. NO.	TOD NO.	
TS NO. 17920-61	DRAWING NO. 3 OF 3	SHEET NO. OF